ENT COOPERATION TREATY (PCT) (12) INTERNATIONAL APPLICATION PUBLISHED UNDER

## (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 6 May 2004 (06.05.2004)

PCT

## (10) International Publication Number WO 2004/038484 A2

- G02B 21/32, (51) International Patent Classification7: 21/22, 21/36, G03B 35/00, H04N 13/00, G01N 15/14
- (21) International Application Number:

PCT/EP2003/011818

- (22) International Filing Date: 24 October 2003 (24.10.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02292658.8

25 October 2002 (25.10.2002)

- (71) Applicants (for all designated States except US): TECHNOLOGIES GMBH [DE/DE]; Merowingerplatz 1a, 40225 Düsseldorf (DE). INSTI-TUT PASTEUR [FR/FR]; 25-28, rue du Docteur Roux, F-75015 Paris (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHORTE, Spencer [GB/FR]; 4bis, rue du Fond du Guichet, F-91400 Orsay (FR). MÜLLER, Torsten [DE/DE]; Hartriegelstrasse 39,

12439 Berlin (DE). SCHNELLE, Thomas [DE/DE]; Koppenstrasse 65, 10243 Berlin (DE).

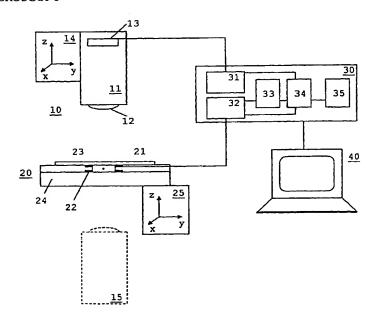
- (74) Agent: HERTZ, Oliver; v. Bezold & Sozien, Akademiestrasse 7, 80799 München (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

## Published:

without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR 3 DIMENSIONAL IMAGING OF SUSPENDED MICRO-OBJECTS PROVIDING HIGH-RESOLUTION MICROSCOPY



(57) Abstract: A method for high-resolution image recording of at least one object with a microscope, comprises the steps of: positioning the object in a receptacle being arranged in the optical axis of the microscope, generating at least two first data sets per object which represent intermediate images of the object with at least two different orientations relative to the optical axis of the microscope, wherein the different orientations of the object are provided by moving the object relative to the receptacle, and evaluating the data sets for obtaining quantitative three dimensional information.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.